

## USDA-Natural Resources Conservation Service

### Notice of Source Identified Release of

#### Rattlesnake Master

The USDA-Natural Resources Conservation Service (NRCS), the University of Northern Iowa (UNI), the Iowa County Integrated Roadside Vegetation Management Program (IIRVMP), the Iowa Department of Transportation (IDOT), and the Iowa Crop Improvement Association (ICIA) announce the release of source identified Southern Iowa Germplasm rattlesnake master, *Eryngium yuccifolium Michx.*

The rattlesnake master has been assigned the NRCS accession number 9068604

**Origin:** Southern Iowa Counties.

#### **Ecotype Description:**

Rattlesnake master is a warm-season perennial native forb which grows well on wet or dry mesic prairie soils. Rattlesnake master height ranges from 2 to 6 feet tall from a short, thick rootstock. The bluish green basal leaves are up to 3 feet long and up to 1 1/2 inches wide. The leaves along the stem are much shorter, but they may be as wide as the basal leaves. All the leaves are thick and parallel veined and have soft or weak prickles along the edges. The bristles are spaced far apart. The leaf bases clasp the single, erect stem. The flower heads are on stout peduncles at the tip of the stem. Each globe or nearly spherical flower head is from 1/2 to 1 inch in diameter. Each head is made up of many small flowers. Whitish bracts stick out sharply from the flowers, which gives the flower head a rough, prickly feel and appearance. The heads have a 'honeylike' odor. Individual fruits, which mature in the spherical flower head, are less than 1/10 inch long. The root of rattlesnake master has been used medicinally by American Indians and pioneers.

#### **Management:**

Rattlesnake master can be propagated from seed or mature plants. Rattlesnake master seeds per pound average 177,700. A seeding rate of 8-10 pounds per acre pure live seeds (PLS) is sufficient for seed production in 30 inch rows. Seed should be planted 1/4 inch deep in a firm relatively weed free seedbed. Seedling vigor is good and stands are comparatively easy to establish where competition is controlled. Post herbicide can be used for grass control. Mowing or cultivating between the rows of the rattlesnake master have been used to reduce competition when weeds begin to severely encroach into the planting. This procedure is the best way to control unwanted weed invasion.

Seed yields are good and can be readily harvested with a combine. Yields of 1000 to 1200 pounds per acre have been commonly harvested on managed stands.

It is easily propagated by division. To produce transplants divide mature plants in spring or fall, and to establish on permanent sites, use transplants in spring or fall.

#### **Site Description:**

Collections were made from the following locations (see attached) and included in the composite rattlesnake master, Central Iowa origin (906804). Collections of rattlesnake master from east to west across Iowa guarantees adaptation of releases for the entire zone. Plants are self-pollinated. For isolation requirements, rattlesnake master will be considered self-pollinated.

**Climate:** The average annual temperature is 50 degrees Fahrenheit. July is the warmest month with an average high of 87 degrees and low of 67 degrees. January is the coldest month with an average high of 29 degrees and low of 10 degrees. The average annual precipitation for this region is 31 inches with much of this coming during the growing season. The average frost-free growing period runs from April 28 to October 10.

**Availability of Plant Materials:**

Breeders material is being produced by the Plant Materials Center, Elsberry, Missouri and the University of Northern Iowa (UNI) at Cedar Falls, Iowa. Source Identified seed is being released to interested commercial seed growers.

**Release Approved By:**

/s/ Roger A. Hansen, NRCS                      Date: 6/16/99  
Missouri State Conservationist

/s/ Robert D. Koob                              Date: 6/28/99  
President, UNI

/s/ Daryl D. Smith                              Date: 6/17/99  
Program Director, IRVM

/s/ Leroy Brown, NRCS                      Date: 6/18/99  
Iowa State Conservationist

/s/ Robert E. Lawson                      Date: 6/29/99  
Secretary/Treasurer ICIA

/s/ Richard S. White                      Date: 8/10/99  
for: Diane Gelburd  
Director, Ecological Sciences Division  
United States Department of Agriculture  
Natural Resources Conservation Service  
Washington, DC

## References

Prairie Plants of Illinois; pp. 108-109; Voigt W. John, Southern Illinois University and Mohlenbrock H. Robert, Southern Illinois University.

The Prairie Garden; p. 37 & pp. 96-97; Smith, J. Robert and Smith S. Beatrice, University of Wisconsin, Madison, Wisconsin, 1980.

Wildflowers of the Tallgrass Prairie, The Upper Midwest; p. 131; Runkel, T. Sylvan and Roosa M. Dean; Iowa State University Press, Ames, Iowa, 1989.

A Field Guide to Wildflowers; p. 44; Peterson, R. T. and McKenny, M. Houghton Mifflin Company, Boston, Mass, 1968.

Flora of Missouri; p. 1122; Steyermark, A. Julian, Iowa State University Press, Ames, Iowa, 1968